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their food in a living state in the ground and only need to dig it up, as desired, to supply food and to make the large quantities of manioc beer which constitute a basic part of their diet.

The manioc beer (*nihamanči*) is prepared by first peeling and washing the tubers in the stream near the garden. Then the water and manioc are brought to the house, where the tubers are cut up and placed in a pot to boil (see Plates 4, 5 and 10). When the manioc has become soft, the pot is removed from the fire and allowed to cool. The manioc is then mashed and stirred to a soft consistency with the aid of a special wooden paddle (see Plate 6). While the woman stirs the mash, she chews handfuls and spits them back into the pot, a process which may take half an hour or longer. The mastication of the mash is considered by the Jívaro to be essential to the proper and rapid fermentation of the brew, and their view seems to be supported by Western physicians who have informally voiced the opinion that the enzymes in the saliva, as well as the bacteria in the mouth, probably hasten the fermentation process.

After the mash has been prepared, it is transferred to a beer storage jar and left to ferment. Although the fermentation takes place rapidly, the beer is usually too much in demand to be allowed to sit very long. In being served, the beer is strained through a tree-gourd sieve to remove manioc fibers, and about one part of water is added to two parts of beer. The resultant liquid tastes somewhat like a pleasingly alcoholic buttermilk and is most refreshing. The Jívaro consider it to be far superior to plain water, which they drink only in emergencies such as when their beer canteens run dry while they are out hunting. Male informants, in addition, expressed the opinion that the beer is at its best if it has been chewed by a pretty girl rather than by an old woman. Beer is also made, in a slightly different fashion (see Plate 7), sea-

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stone to crush maize for chick feed. The wooden planting and digging sticks used in agricultural work have been mentioned previously.

Vessels are made by the women from clay and gourds. All pottery is manufactured by the method of coil construction and vessels are finished by scraping. Three kinds of clay are used for different types of vessels. Carbonized bark of the *apáčaram* tree is powdered for tempering material in food bowls, while sand temper is used in drinking bowls, fermentation jars, and cooking jars. All vessels except cooking jars are coated with red achiote or black beeswax after firing. Only the interiors of large drinking bowls, the exteriors of miniature drinking bowls, and the interior necks of fermentation jars are ever decorated. Even then, such decoration is usually simple and hastily made, often consisting of unelaborated irregular zigzag and dot patterns in vegetal paint. The one apparent exception is the miniature drinking bowls, which sometimes have intricate and well-executed designs. These, however, are obtained by trade from the Canelos tribe to the north.

The fermentation jars are the largest vessels made, averaging about ten to thirteen gallons in capacity. These jars, covered with a drinking bowl or banana leaf, serve to store the fermenting manioc or chonta palm fruit beer. Next in size are the cooking jars, the largest of which are employed to boil the hallucinogenic *Banisteriopsis* for resident or visiting shamans. The other chief ceramic vessels are food-serving bowls and the two sizes of drinking bowls. Small pottery or gourd jars serve to store the curare blowgun dart poison. One special miniature pottery bowl is used by old men to brew an emetic tea from *Ilex* sp. leaves.

Large long-handled gourds hold water for cooking and

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beer making, while shorter ones store the water with which the men rinse their mouths upon arising and after eating. Other gourds are cut in half and perforated to serve as sieves in straining manioc fibers out of the beer. Tree gourds are used by men as canteens for carrying the thick beer mash when hunting or traveling far.

Three kinds of baskets are made, all by the men: a plaited openwork basket used primarily for carrying and storing food; a wickerwork type for carrying fish; and a relatively insect-proof plaited and double-walled basket with a banana leaf lining and a cover for storing featherwork and other personal effects. Matting is unknown.

Virtually every adult male possesses at least one firearm for hunting and fighting. While there are a few ancient Winchester .44 carbines obtained from the Achuara, almost all the guns are Spanish-made muzzle-loading shotguns of recent manufacture secured primarily from trading partners dwelling in the region of white contact in the Río Upano Valley.

Most of the Winchester carbines, although originally pump-action weapons, are so worn that they can function only as single-shot weapons. For fighting, they are loaded with highly valued .44 pistol cartridges obtained through native trading partners from the Achuara, who in turn secure the cartridges from other trading partners in Peru. For hunting, the cartridges are simply reloaded with black powder and shot, and the cartridge primer is replaced with the type used on muzzle-loading shotguns.

The shotguns, percussion-cap weapons usually with a 20-gauge bore, are much preferred over the Winchesters for hunting and also are much more plentiful throughout the tribe due to their steady acquisition by means of the native trading partnerships. They are loaded with black powder